



UNMANNED AIRCRAFT SYSTEMS INTEGRATION IN THE NATIONAL AIRSPACE SYSTEM PROJECT | INTEGRATED TEST AND EVALUATION

ACAS Xu FLIGHT TEST 2

Purpose

- Develop next generation of detect and avoid (DAA) hardware for UAS
- Demonstrate system behavior integrated on prototype avionics and UAS

Benefits of ACAS Xu Over Current System

- Collision Avoidance against cooperative and noncooperative intruders
- Horizontal and vertical maneuvers against multiple intruders
- Resolution advisory (RA) logic accounts for sensor quality and ownship performance limitations

Test Duration

- June 13—August 10, 2017: 10 to 12 flights (~150 encounters)

Tech Transfer

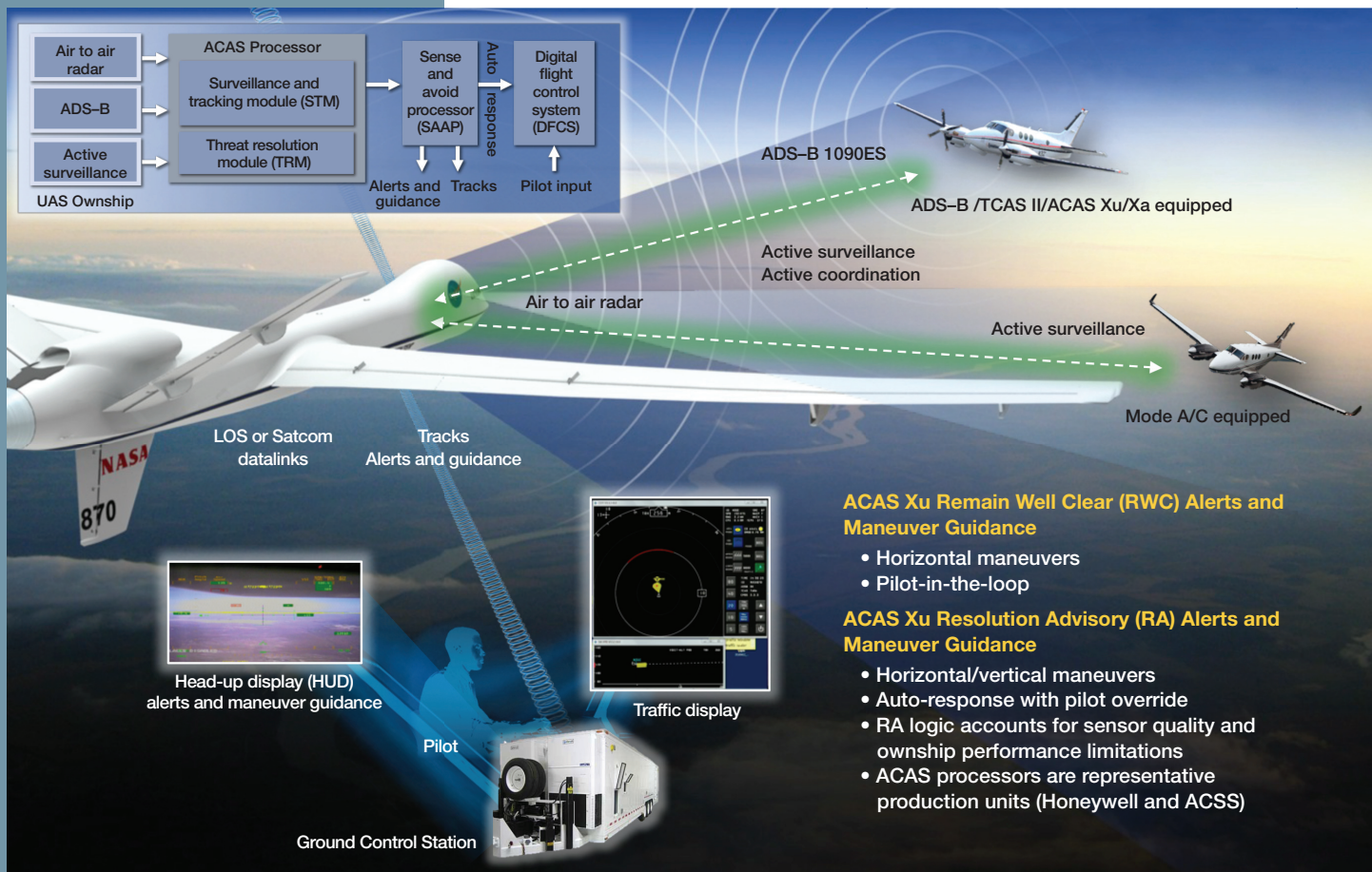
- Advance ACAS Xu Minimum Operational Performance Standards (MOPS) development

Project Benefit

- Continued collaboration with the FAA
- Mature DAA technologies



PRIMARY PARTNERS



ACAS Xu Remain Well Clear (RWC) Alerts and Maneuver Guidance

- Horizontal maneuvers
- Pilot-in-the-loop

ACAS Xu Resolution Advisory (RA) Alerts and Maneuver Guidance

- Horizontal/vertical maneuvers
- Auto-response with pilot override
- RA logic accounts for sensor quality and ownship performance limitations
- ACAS processors are representative production units (Honeywell and ACSS)